## **CLAIMS**

## What is claimed is:

1. A system for coupling at least one atom and at least one hour-glass mode and converting quantum electrodynamic vacuum cavity fluctuations electromagnetic radiation energy to electrical and to a superconductive vortex implosion propulsion energy comprising;

a first means for receiving incident primary electromagnetic radiation, said means for receiving and producing emitted secondary electromagnetic radiation at a first frequency, said first means for receiving having a first volumetric size selected to resonate at a frequency within the frequency spectrum of the atomic transition frequency of said primary electromagnetic radiation in order to produce the secondary electromagnetic radiation at the first frequency at an enhanced energy density;

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a second means for receiving and guiding the incident primary electromagnetic radiation, said means for receiving producing emitted secondary electromagnetic radiation at a second frequency, the secondary radiation at the first frequency and the secondary radiation at the second frequency interfering to produce secondary radiation at a lower frequency than that of the incident primary radiation, said second means for receiving having a second volumetric size selected to resonate at a frequency within the frequency spectrum of the incident primary electromagnetic radiation in order to produce the emitted secondary electromagnetic radiation at the second frequency at an enhanced energy density;

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a third means an antenna for receiving the emitted secondary electromagnetic radiation at the lower frequency, said antenna providing an electrical output via spark gap transmission responsive to the secondary electromagnetic radiation received,

a spark gap emitter electrically connected to said antenna for receiving electrical current output from said antenna and converting the electrical

current output to electrical current discharge at a higher energy density having a desired voltage and waveform.

a forth means for receiving and amplifying the emitted secondary electromagnetic radiation at a higher energy density a tandem set of backward wave radio cavities having a desired voltage and waveform;

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a fifth means composed of dielectric materials for receiving the emitted secondary electromagnetic radiation selectively and proximal to each other and which receive incident electromagnetic radiation at a higher energy density for coupling with external bodies thereby comprising an implosive propulsion system; and

a sixth means for receiving the emitted secondary electromagnetic radiation at a higher energy density but not by way of limitation a hyperbolic dish and delta antenna and a reverse wave energy having a desired voltage and waveform byway of reflection or english on the emitted waves such that at least a portion of the energy returns into the system simultaneously.

## 2. The system of claim 1 wherein:

said first means for inductively receiving and transmitting the emitted secondary electromagnetic radiation is composed of a resonant cavity atom coupled optical waveguide of usual material;

said second means for inductively receiving and transmitting the emitted secondary electromagnetic radiation is composed thereof a predetermined composition comprising a ferrite bead choke and deflection yoke coil and a set of spark gap electrodes comprising a safety spark gap electrode system selectively and strategically disposed around the perimeter of said coil also composed of a shading coil comprising a one way valve;

said third means for inductively receiving and transmitting the emitted secondary electromagnetic radiation is composed of but not by way of limitation a loop antenna tank circuit lumped transmission line spark gap transmitter.

said forth means for inductively receiving and transmitting and amplifying a beat frequency of the emitted secondary electromagnetic radiation is composed of a set of tandem reverse backward wave radio cavity oscillators;

said fifth means for inductively receiving and transmitting the emitted secondary electromagnetic radiation is composed of a twin set of dielectric materials there disposed strategically adjacent to said reverse backward radio cavity oscillators; and

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said sixth means for inductively receiving and transmitting the emitted secondary electromagnetic radiation and transmitting same but not by way of limitation comprising a delta antenna of predetermined geometry a tandem set of pancake or archimedes spiral coils a hyperbolic dish comprising an antenna array.

3. The system of claim 1 wherein:

said first means for receiving is an atom coupled optical waveguide antenna structure comprising a predetermined configuration of apertures grounding wings,

said second means for receiving is a ferrite bead choke coil and safety spark gap system;

said third means for receiving is a loop antenna lumped transmission line tank circuit spark gap transmitter;

said forth means for receiving is a tandem set of reverse wave oscillating cavities;

said fifth means for receiving is a tandem set of dielectric materials; and

said sixth means for receiving is a delta antenna coil and hyperbolic dish antenna.

4. A system for converting incident quantum electrodynamic cavity vacuum fluctuations or zero point electromagnetic radiation energy to electrical and implosion propulsion energy, comprising:

a first means for transmitting for receiving incident primary zero point electromagnetic radiation, said means for receiving producing emitted secondary electromagnetic radiation at a first frequency;

a second means for transmitting for receiving the incident primary zero point electromagnetic radiation, said means for receiving producing emitted secondary electromagnetic radiation at a second frequency, the secondary radiation at the first frequency and the secondary radiation at the second frequency; the secondary radiation at the first frequency and the secondary radiation at the second frequency ringing or interfering to produce secondary radiation at a greater energy density which is greater than that of the incident primary radiation;

an antenna for transmitting for receiving the emitted secondary electromagnetic radiation at the greater frequency or energy density, said antenna providing an electrical output and input responsive to the secondary electromagnetic radiation received;

means for transmitting for receiving the emitted secondary electromagnetic radiation at the beat frequency from said antenna, said means for transmitting inductively connected to said antenna; and

a means for transmitting for receiving the emitted secondary electromagnetic radiation at the beat frequency from said antenna and converting the same to electrical RF or electromagnetic current having a desired voltage and waveform means for transmitting for receiving emitted secondary electromagnetic radiation at the beat frequency from said antenna and converting same to electrical RF or electromagnetic current having a desired voltage and waveform.

5. The system of claim 4 wherein: said first means for receiving has a first second third forth fifth and sixth volumetric size selected to resonate in response to the incident primary or atomic transition frequency electromagnetic radiation in order to produce the secondary electromagnetic radiation at the first frequency at an enhanced energy density; and

said second third forth fifth sixth seventh eight and ninth means for receiving have their own second volumetric sizes which are selected to resonate in response to the incident primary electromagnetic radiation in order to produce

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emitted secondary electromagnetic radiation at the second through the ninth frequency at an enhanced energy density, said first second third forth fifth sixth seventh eight and ninth volumetric sizes selected based on parameters of propagation constant of said first second third forth fifth sixth seventh eight and ninth means for receiving, propagation constant of medium in which said first through said ninth means for receiving are located and frequency of the incident primary electromagnetic radiation.

6. The system of claim 5 wherein: the structure of the first means for receiving is different from the structure of the second third forth fifth sixth seventh eight and ninth means for receiving, difference between the structure of said first means for receiving and the structure of said second means for receiving selected so that the beat frequency resulting from the difference is a frequency which facilitates conversion of the beat frequency electromagnetic radiation RF at an enhanced energy density which energizes the third means for receiving and is different from the structure of the second and different from the structure of the first means for receiving and said third means energizing the forth and fifth structures volumetric sizes selected based on parameters of propagation constant of said first second third forth fifth sixth seventh eight and ninth means for receiving, propagation constant of medium in which said first through said ninth means for receiving are located and frequency of the incident primary electromagnetic radiation;

wherein the structure of the forth and fifth means for receiving are different from the structure of the first second third and sixth seventh eight and ninth means for receiving, difference between the structure of said forth and fifth means for receiving and the structure of said second third means for receiving selected so that the beat frequency resulting from the difference is a frequency which facilitates conversion of the beat frequency electromagnetic radiation RF at an enhanced energy density which energizes the sixth and seventh means for receiving is different from the structure of the first second third forth fifth eight and ninth and different from the structure of the first second third forth and seventh eight and ninth means for receiving volumetric sizes selected based on parameters of propagation constant of said first second third forth fifth sixth seventh eight and ninth means for receiving, propagation constant of medium in

which said first through said ninth means for receiving are located and frequency of the incident primary electromagnetic radiation; wherein the structure of the sixth and seventh means for receiving are different from the structure of the first second third forth fifth and eight and ninth means for receiving, difference between the structure of said sixth and seventh means for receiving and the structure of said first second third forth and fifth means for receiving selected so that the beat frequency resulting from the difference is a frequency which facilitates conversion of the beat frequency electromagnetic radiation RF at an enhanced energy density which energizes the eight and ninth means for receiving is different from the structure of the first second third forth fifth sixth seventh and different from the structure of the first second third forth fifth sixth and seventh means for receiving volumetric sizes selected based on parameters of propagation constant of said first second third forth fifth sixth seventh eight and ninth means for receiving, propagation constant of medium in which said first through said ninth means for receiving are located and frequency of the incident primary electromagnetic radiation; and

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wherein the structure of the eight and ninth means for receiving are different from the structure of the first second third forth fifth sixth seventh means for receiving, difference between the structure of said sixth and seventh means for receiving and the structure of said first second third forth and fifth and sixth and seventh means for receiving selected so that the beat frequency resulting from the difference is a frequency which facilitates conversion of the beat frequency electromagnetic radiation RF at an enhanced energy density which energizes the eight and ninth means for receiving is different from the structure of the first second third forth fifth sixth seventh eight and different from the structure of the first second third forth and seventh eight and ninth means volumetric sizes selected based on parameters of propagation constant of said first second third forth fifth sixth seventh eight and ninth means for receiving, propagation constant of medium in which said first through said ninth means for receiving are located and frequency of the incident primary electromagnetic radiation for receiving and conversion to electrical implosive propulsion energy.

7. The system of claim 4 wherein:

said first means for receiving for transmitting is composed of a waveguide optical coupled atom cavity displaying a frequency-dependent photon-mode density;

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said second means for receiving for transmitting is composed of a ferrite material and coil and safety gap electrodes;

said third means for receiving for transmitting is composed of a lumped element antenna tank circuit;

said forth means for receiving for transmitting is composed of a twin tandem pair of reverse backward wave oscillating cavities;

said fifth means for receiving for transmitting is composed of a twin tandem pair of dielectric materials; and

said sixth means for receiving for transmitting is composed of a hyperbolic dish and delta antenna coil.

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8. The system of claim 4 wherein:

said first means for receiving is generally elliptical;

said second means for receiving is circular;

said third means for receiving is circular;

said forth means for receiving is cylindrical;

said fifth means for receiving is cylindrical;

said sixth means for receiving is circular;

said seventh means for receiving is circular;

said eight means for receiving is paraboloid; and

said ninth means for receiving is triangular.

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9. The system of claim 4 wherein said atom coupled optical waveguide antenna displaying a frequency-dependent photon-mode density is positioned generally end to end comprising a bore-sight between said first, second, third, forth, eight and ninth receiving structures and forming delta-T drift region between said forth fifth sixth and seventh means for receiving.

- 10. The system of claim 4 wherein said antenna system is an antenna array.
- 11. The system of claim 4 wherein said antenna is a generally convex shell partially enclosing said first means for receiving.

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- 12. The system of claim 4 wherein said means for transmitting is a system comprising an antenna array and tank circuit arc.
- 13. A system for converting incident quantum electro dynamic zero point electromagnetic radiation energy to electrical implosion propulsion energy comprising:

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a plurality of pairs a first through ninth means for receiving for transmitting incident quantum electro dynamic primary zero point electromagnetic radiation and second means for receiving incident primary zero point electromagnetic radiation, a third forth fifth sixth seventh eight and ninth plurality of pairs of means for receiving transmitting amplification said first means for receiving producing emitted secondary electromagnetic radiation at a first frequency, said second means for receiving the incident primary zero point electromagnetic radiation producing emitted secondary electromagnetic radiation at a second frequency, the secondary radiation at the first frequency and the secondary radiation at the second third forth fifth and sixth and seventh eight and ninth frequency interfering to produce secondary radiation at a beat frequency which is higher than that of the incident primary radiation, said first means for receiving having a first volumetric size selected to resonate in response to the incident primary electromagnetic radiation in order to produce the secondary electromagnetic radiation at the first frequency at an enhanced energy density, and said second means for receiving having a second volumetric size selected to resonate in response to the incident primary electromagnetic radiation in order to produce the emitted secondary electromagnetic radiation at the second third forth fifth sixth seventh eight and ninth frequency at an enhanced energy density, said first second third forth fifth and sixth seventh eight and ninth volumetric sizes selected based on parameters of propagation constant of said first second third forth fifth sixth seventh eight and ninth means for receiving, propagation constant of medium in which said first through ninth means for receiving are located and

frequency of the incident primary electromagnetic radiation, said first second third forth fifth sixth seventh eight and ninth volumetric sizes being different from each other:

a plurality of antennas for receiving the emitted secondary electromagnetic radiation at either a lower or higher frequency, said antenna providing an output responsive to the secondary electromagnetic radiation received, each of said plurality of antennas receiving the emitted secondary electromagnetic radiation of one of said pairs of first, second, third, forth, fifth sixth seventh eight and ninth means for receiving;

means for transmitting the emitted secondary electromagnetic radiation at the beat frequency from said antenna, said means for transmitting inductively connected by boresight and or drift region to said plurality of antennas: and

a converter inductively connected via RF at a higher energy density to said means for transmitting for receiving the emitted secondary electromagnetic radiation at the beat frequency from said antenna array system and converting same to electrical current having a desired voltage and waveform and collectively energizing said forth fifth sixth seventh eight and ninth antenna structure via boresight and drift region converting same to an implosive propulsion energy.

14. In an externally winged craft having a fuselage and means for providing lift and propulsion for the aircraft, the improvement wherein an internally disposed swirl vane that is a wing within a wing essentially unobstructed within a substantially horizontal hyperbolic egg-shaped vortex amplification chamber or opening disposed in a rotational convergence zone extending through the main wing structure forms said propulsion that is a suction-head or vortex flow such that the hyperbolic swirl chamber or vortex generator, a swirl-vane forms said means for providing lift and propulsion and a means for cooling the aircraft by producing a thermoacoustic cooling effect thereby setting into motion a refrigerated effect which may occur by the compression and expansion of atmospheric gas for the aircraft and provide an internal wing chamber and swirl vane or wing within a wing thereof, wherein the fuselage has

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opposed forward, lateral and rear ends intersected by said hyperbolic vortex chamber disposed within said vortex convergence zone such that the passage or input element opens forward, and through the upper and lower surfaces of the aircraft's main wing structure wherein the architecture of the wing characterized as being formed by a single portion of the wing and strategically positioned vortex swirl-vane beginning in the optimal tangent point disposed in the convergence zone of the hyperbolic egg-shaped chamber or labyrinth located within the main wing structure.

- 15. The aircraft and invention of claim 1 further comprising propulsion means for forming a at least a portion of a rearward directed air stream in addition a preferred and improved use of environmental energy thereby forming a vortex flow or suction head so as to propel the aircraft; and means for directing a greater portion of the air stream passing through said hyperbolic chamber and vortex convergence zone whereby the aircraft is propelled forward by the Implosion that is a vacuum, vortex flow or suction head and thereby causing thermoacoustic cooling of the craft by compression and expansion of gases.
- directing at least a portion of said air stream through the selectively shaped hyperbolic shaped horizontal vortex flow chamber comprises: means forming a tangential zone in portions of the fuselage underlying the section of the wing that is open to the environment that is said horizontal vortex flow chamber near the forward end of the aircraft communicating with the vortex flow through the horizontal orifice and input elements and main wing sections through a horizontal orifice formed in the floor of the lifting wing and extending through the wing to the upper most surface thereby forming a hyperbolic vortex chamber and means for diverting at least a portion of said air stream into the tangential zone giving rise to a pressure gradient in the air stream's convergence zone, which result in the formation of thermoacoustic cooling.
- 17. The invention or aircraft of claim 1 wherein the vortex generator comprises a transverse flap forming a portion of the main wing section adjacent the forward end of the aircraft, said flap pivotally connected at the side

thereof nearest the beginning of the hyperbolic vortex chamber of the fuselage hinged about a transverse axis; and means for pivoting said flap.

18. The aircraft and invention of claim 1 wherein the hyperbolic vortex chamber and vortex generator has a first portion extending longitudinally along one side of the vortex generator lifting wing-let or swirl-vane and a second portion extending longitudinally along the opposite side of the ellipsoidal egg-shaped hyperbolic vortex chamber, the first and second portions of the hyperbolic chamber meeting at a negative dihedral at the center of the hyperbolic vortex flow chambered vortex generator.

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- 19. The aircraft of claim 1 wherein portions of the fuselage forming the hyperbolic chamber of the vortex generator at the front-end of the aircraft are formed into two transversely extending, pivotable flaps and portions of the fuselage forming the vortex generators and hyperbolic chambers at the front-end of the aircraft and disposed therein the vortex generators are formed into two transversely extending, pivotable flaps so as to provide pitch and roll control for the aircraft.
  - 20. The aircraft of claim 1 further comprising a plurality of horizontally extending internal rudders pivotally mounted within the hyperbolic vortex chamber near the front-end of the aircraft's main wing affixed to the swirl-vane vortex generators.
  - 21. The aircraft of claim 7 wherein portions of the fuselage forming sides of the hyperbolic chamber or convergence zone at the forward end of the fuselage are formed into horizontally extending flaps pivotable about the leading edges of the swirl-vanes, vortex generating wing-lets thereof laterally outwardly from the fuselage.